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this case occupied by a cavity three-quarters of an inch across. There were no petals; but in place five gland or rather bud-scale-like processes, at regular distances, on the edge of the green fibrous outline before referred to. The outer whorl, which usually forms the calyx, was almost asepalous, as a mere scarious membrane marked the place where the calyx segments or sepals should have appeared. It was so easy in this specimen to trace the dividing line between the outer or calycine whorl and the inner or corolline whorl, which uniting and becoming succulent formed the popular apple fruit, that it was worthy of note in this connection.

But the most interesting feature in this specimen was what were probably, from their similarity in appearance, cork cells, formed abundantly on the outside of the apple. It would seem, that, with the lack of development in the inner series of whorls necessary to the perfect fruit, those which remained were liable to take on somewhat the character of bark structure.

Dr. LECONTE mentioned that he had published in the Proceedings for December, 1866, a paper entitled "List of Coleoptera collected near Fort Whipple, Arizona, by Dr. Elliott Coues, U. S. A., in 1864–65." He had recently received a letter from Dr. Edward Palmer, stating that the specimens had been collected mostly by the latter, and in accordance with the desire of Dr. P. the fact was now recorded.

FEBRUARY 18.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-seven members present.

The following paper was presented for publication:—

"Description of Mexican Ichneumonidæ, Part II." By E. T. Cresson.

Mr. THOMAS MEEHAN presented specimens of leaves of a Begonia on which minute folioles appeared as densely as hair all over the upper surface, while the leaf was on the growing plant. The little growths first appeared as succulent hairs, and these hair-like processes subsequently divided or produced the leafy blades from their apices.

Mr. M. remarked that hairs were at any rate structurally but graded thorns, of which bristles were an intermediate stage. Spines often bore leaves, but it was unusual for thorns to do so. It might not be that these leaf-bearing processes were really hairs though they had that appearance.

He further observed that last year he called the attention of the Academy to the fact that in some Scrophulariaceous plants, such as *Torenia* and *Mimulus*, the bilobed flattened stigmas closed when touched, as did the leaf of *Dionæa muscipula.* He had recently noticed that the divided pistil of *Tecoma jasminoides* had the same power. When touched with its own pollen it closed at once, and remained closed; but if touched with any foreign substance it opened again after the lapse of a short time. The Bignoniaceæ were closely allied to Scrophulariaceæ at any rate, and the plants of each might be expected to possess this power.

He also said that, as was well known, the violet and the balsam (Impatiens) produced two distinct forms of flowers—one with a corolla and the other without—the former producing them underground. It was remarkable that these secretly produced (cleistogenous) flowers, in which there was no opportunity for anything but self-fertilization, should be more fertile than those which had the most abundant opportunities of aid from wind, insects, and other favoring influences. The Catalonian jasmine of our greenhouses was another illustration of this phenomenon. He had observed, and no doubt others had often done the same, for many years past, that there was a great tendency to a supposed abortion of the flowers in this plant. But this year he had some plants which failed to produce a single perfect flower. To his astonishment these plants were covered with developing seed-vessels, while in the plants producing perfect flowers there was no sign of any such tendency. On examining these imperfect flowers he found a miniature corolla was formed, but so closely twisted together that it could not open, and always remained inside the calyx-segments. The pistils in these flowers were differently formed from those in the perfect ones. The last have the two segments of the bilobed pistil coiled in a spiral manner; the former has no appearance of any division, but seem united into a small cone. In many cases the style was somewhat flattened, and there appeared to be a stigmatic surface along each edge. It appeared from his examination that there was very little pollen in the anthers of these flowers, and the apex of the pistil was pushed beyond them, and the idea occurred to him that possibly fertilization might occur by the way of the stigmatic edge before referred to.

Mr. THOMAS G. GENTRY called the attention of the Academy to what he considered to be an interesting case of a change of habits which had recently occurred in the life of an ordinary chickaree, the *Scinus hudsonius* of Pallas. During the early part of last autumn, his attention was called to the fact that the birds in a certain designated locality of Mount Airy, during the hours of the night, were undergoing a system of wholesale destruction, the work of small animals which were supposed to belong to some species of Carnivore. Laboring under this impression, and being desirous of securing a specimen or two, he started for the scene of slaughter, bent upon discovering the name and character of the animal; when within a few rods of the place, the almost deafening noise that greeted his ears, from the tall trees, led him to suspect that all was not right. After reaching the spot, a few moments of anxious waiting sufficed to reveal to him the cause of the noise and the origin of the sacrifice above alluded to; for, sitting upon a twig just over his head, he observed a *chickaree*, holding in its paws a bird which it had captured, and from which it was very contentedly sucking the life current.

It is a well-established fact, he further remarked, as far as he had been able to verify it, that the numerous species of Rodents, with but two exceptions at the most, subsist principally or entirely upon vegetable matter, especially the hard parts of plants, such as nuts, bark, and roots.

This habit of imitating the propensities of the *Mustelidæ*, he thought might have arisen from the habit which some squirrels possess, possibly the one under consideration, of sucking the eggs of birds; the blood-sucking habit, he assumed to be an outgrowth from the other.

This adoption of another's mode of life by *S. hudsonius*, he thought a discovery of some note, as usurpation of habits, leading to functional and structural changes in an animal's economy, is accounted an element of no mean weight in the *development hypothesis*, according to the testimony of able writers upon Evolution.

Prof. Cope exhibited the cranium of the horned Proboscidian of Wyoming, *Loxolophodon cornutus*, and made some remarks on its affinities. The short-footed Ungulates or *Proboscidia*, are represented by two very different families in the Eocene formations of North America, the *Eobasiliidæ* and *Bathmodontidæ*. The first embraces four known genera, as follows:—

1. Nasal bones with flat horizontal horn-cores overhanging their apex.
Cervical vertebræ short; malar bone much reduced in front. *Loxolophodon.*
2. Nasal bones with small tuberosities.
Cervical vertebræ short. *Eobasileus.*
Cervical vertebræ longer; the malar bone reaching maxillary face. *Uintatherium.*
3. Nasal bones without the anterior horn-cores.
Cervicals? *Megaceratops.*

Of the above genera there are five well-determined species, viz.: *L. cornutus*, Cope; *E. pressicornis*, Cope; *U. robustum*, Leidy; *U. lacustre*, Marsh; and *M. coloradoensis*, Leidy. *E. furcatus*, Cope, and *U. mirabile*, Marsh, would, perhaps, have to be added.

There are two genera of *Bathmodontidæ*, as follows:—
One posterior molar with two transverse crests. *Bathmodon.*
Three posterior cross-crested molars. *Metalophodon.*

Of this family four species are known, viz.: *Bathmodon radians*, Cope; *B. semicinctus*, Cope; *B. brevipes*, Cope; *Metalophodon armatus*, Cope.

FEBRUARY 25.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-five members present.

The death of Commodore John P. Gillis, U.S.N., was announced.

The following gentlemen were elected members:—
Harry F. Baxter, M.D., Alfred Moore, John M. Hartman.

On report of the committees, the following papers were ordered to be printed:—